NO 14

Dissertation
On
The use of Spiders web
In the cure
of
Intermittent Fever.

1. Spiders web - in intern.
2. Secale Cornutum
3. Capsicum Annuum
4. Charcoal - med: virt. of
5. Cort: Quercii -
6. Polygala Senega
7. Xanthox: fraxinifol.
8. Camphore

Dr. Broughton
Sth Carolina
1818

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Nathaniel Chapman, M. D.

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Dear Sir

During your lectures delivered in the University of Pennsylvania for the year 1817 you mentioned the use of the Spiders web in the cure of Intermittent fever, as communicated to you by Dr Jackson.

In consequence of which I have endeavoured to investigate the Subject, and hope my endeavours have not been fruitless.

To you I am indebted for the Idea which first induced me to make the investigation, and to you I beg leave to dedicate the product.

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Preface

As the subject of the following dissertation is (I believe) but little known by the Physicians of the present day, a few preliminary observations, I consider not improper or unnecessary. The laws of this institution compel me in the first place to compose a medical thesis, and a desire in the second to furnish a subject not already fully discussed induced me to make choice of the present; I am aware of the many difficulties I labour under in consequence of the little information that can be obtained from Authors; the greater part being collected from my own observations, & the verbal communications and friendly letters of those of my acquaintances who have had it in their power to gain any information on the subject.

From the operation and efficacy of the web as appeared under my observations, I am persuaded that many useful theories, and arguments might be deduced from it. But as I feel myself incompetent to the task, I shall state facts as they are, and leave the discussion of theories and arguments to some abler Pen.

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In order to give a correct & systematic account of the cobweb I shall proceed to state first, the nature and appearance, 2d the modus operandi and 3rd its application and efficacy in the cure of intermittent fever,

1st As no medical information can be obtained from an account of the structure of the web, and the use it is applied to, by the insect which nature formed for its production. I shall refer you to the Encyclopedia under the head Aranea, and proceed myself to the discussion applicable to medical purposes -

The web is found in the neighbourhood of old buildings among the leaves and branches of shrubs, or suspended from trees in the form of a delicate net work; where it is deposited in great abundance from the first of September to the middle of October. The fresh web, before it has been long exposed to the action of the sun & atmosphere is extremely glutinous, and when pressed together by the fingers or rubbed in a mortar, assumes a black appearance resembling India rubber in texture & elasticity, which however it soon loses becomeing hard and fibrous, if it is allowed to remain for the space of

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two or three days after it has been spun it is completely deprived of its glutinous quality and the fibres cannot be made to adhere except by the addition of some gummy matter, Gum. Arabic, answers this purpose.

When dried it is extremely light of a greyish colour without taste or smell, and has much the appearance of threads of very fine silk matted together.

This is by far the most usual appearance, as it is very difficult to collect a sufficient quantity of the fresh webs, each web containing not more than one or two grains; and if not collected previous to the third day after it is spun, it will be deprived of its gluten and consequently reduced to the dried form.

Before I enter upon the description of the preparations of the web and of the species of spider supposed to be most efficacious I shall insert an extract from Dr Caldwells Notes in the first lines of Cullens practice. I am perhaps premature but upon consideration the present appears the best place for its insertion.

"A remedy now becomeing fashionable in Great Britan in "the cure of this complaint* and supposed to be efficacious above "all others is the spiders web in doses of from two to four grains

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if taken during the paroxysm it shortens it, if before prevents it.
"It is said that no Intermittent resists more than two or three
"repetitions of it, it is usually administered in the form of
"pill previously to the expected attack,
"The species of Spider whose web is most efficacious we
"are unable to designate, Caldwells bullen vol: 1st 211th Page

This account I have found strictly correct with the exception of the dose; the difference of which, I shall mention in its proper place,

Offic: Preps With regard to the preparations of the web for medical use the Apothecary is extremely limited; it being insoluble in water. Proof spirit, or even the human saliva, it is impossible to prepare it either in form of decoction, infusion, or tincture; In consequence of the gluten of the flesh, and the thread like structure of the dried web it is equally difficult to reduce it to powder; the only possible form therefore is that of Pill, to which it can easily be reduced when fresh without the aid of any other article, and when dried, by the addition of Starch, Bread, or Gum. Arabic, the latter I have found most efficacious, a sufficient quantity of the mucilage being added to form a mass,

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species, The Black spider has been supposed by Dr R James to be the most efficacious, ~~xxx xx xxxx~~ and the same opinion has been advanced by Dr Poyas of Charleston So Carolina (as will be mentioned in the sequel.

This opinion I think I can safely state to be incorrect and am satisfied that facts & arguments can be produced sufficiently strong to prove the assertion, Upon examination of the webs of the various species of spider, I found them all in the recent state possessed of the same glutinous quality, and when dried of the same fibrous structure;

A very peculiar substance, appeared necessary for the formation of the web which ensnares flies &c for the food of the Insect and that the web of every species was equally calculated for this purpose;

This fact therefore being established that the webs of every species was the same both in appearance and utility. I am inclined to believe that like the Chyle of the human system every substance taken into the Stomach of the Insect (without regard to species) produce one homogeneous mass, qualified for every purpose to which the web of any one species may be applied,

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This opinion I confess to be theoretical, and perhaps erroneous. but there are also facts corroborating, which I shall here proceed to state, Having had some opportunities to try the effect of the web in disease, & finding it difficult to procure the production of any one species, I collected it promiscuously, and was pleased to find it in more than one instance productive of the best effects; another fact which I collected from the Encyclopædia under the head Araneus, is equally important, It is there stated that "every species of spider changes its colour & size, according to age, sex, and season; so that the black spider in one month and the black spider in another, though in appearance the same may be distinct species, With this I shall conclude this part of the description & proceed to that next in order.

The Modus operandi is the point next in question: a point of importance; which importance creates considerable regret, that I shall not have it in my power to give that information which my own inclination, would prompt or the nature of the subject demand, But as every article of the Materia Medica was not developed in a day, so the operation of each must be improved by time and observation.

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The obscurity of the subject & the caution necessary to be attended to in all articles of experiment, I hope will be a sufficient excuse for the unsatisfactory account of the operation of the Spiders web. In all the cases of disease which I have seen or heard of the exhibition of the web, no sensible, or at least no uniform operation could be observed: some Patients were sensible of none, others of a slight sudorific, and some a nauseating effect, and one or two thought that it proved cathartic after remaining in the system for the space of twelve or fifteen hours. These accounts being so incorrect & various I determined to ascertain (if possible) the correct operation by giving the web to healthy persons. I accordingly chose healthy Adults, and exhibiting the web, I detained the Patients in order carefully to observe any operation that might occur, the Pulse being timed, & the Patients kept in a recumbent posture.

I found from these experiments that the operation of the web, appeared principally to be upon the Arterial system; and perhaps in less time than any article already known * The Force & frequency of the Pulse being uniformly reduced; in some cases ten in others fifteen strokes

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in a minute, and in one case the Pulse from being strong, & full, became soft, small, and very compressible, all which operation took place within the space of two hours, after which time the Artery gradually regained its former force and frequency. This has been the only invariable effect I could observe all others appearing but Anomalous,

As the Theory of Sedatives and Stimulants has been already so ably discussed I beg leave to pass it over in silence.

Dose. Dr Doyle informed me that he gave the web in doses of twenty grains. I think I may state from twelve to twenty grains to an adult to be both safe and efficacious, the usual time of exhibiting the web is about an hour previous to the attack.

Application & efficacy in Intermittent Fever.

A gentleman of veracity informed me that he had used the web with the best effect in the case of a servant of his who had been troubled with an Intermittent fever for the space of Eighteen months. All the evacuantia usually employed were used, and Peruvian bark in large quantities

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was inefficacious; at length being informed of the web, he gave ℞ every day before the expected attack, which effected a complete cure in the space of one week,

A second & a third case occurred which he treated in the same manner and with the same success,

He informed me that Dr Pogas was the Gentleman to whom he was indebted for his information, & being myself acquainted with the Dr. I wrote & received the following answer

"Dr Sir

"I have to acknowledge the receipt of your letter "respecting the spiders web. it is now near twenty years "since I was engaged in the Practice of Medicine, during "which I made use of the web in cases of Intermittent fever, "after the usual evacuants had been used, and when the "Bark was inadmissible or ineffectual, I gave it in doses of "twenty grains an hour before the expected attack. and "think I may say I never knew it fail. I used the web of "the black spider, but think that the web of any might an-"swer.

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After having received the above mentioned communications I informed one or two Medical Gentlemen who were practitioners in that part of the country in which I resided; requesting them to make such experiments as might be convenient or agreeable, Dr Holmes a graduate of the University of Pennsylvania and a practitioner for five or six years furnished me with the following account,

Dear Sir

According to your request I send you "an account of two cases in which I exhibited the spi-"-ders web, two Negroes had had Intermittent fever for "three or four weeks accompanied with violent head ache: "one of them complained of the pain being more severe "during the intermission. Emetics and cathartics &c "had been given during the paroxysm and Bark during "the intermission but still every evening it returned; "finding the disease still continue I gave them the spi-"-ders web, to each 3 pills containing 4 grains were exhibited "just before the chill came on which had the effect of short-"ning the fit considerably, 5 pills containing 4 grains "were given to each at the next paroxysm which had the

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Yours Truely

Henry M Holmes.

A short time after I received the following letter from Dr Hay a graduate of the University of Edinburgh and a practitioner of Medicine in the stat of St. Lucia

Dear Sir

"When at Cordesville* the other day, you "asked me if I knew any thing respecting the Medical "virtues of the cobwebs; it appears like many others "which have had their advocates for the day, to fall "into disuse, as I have never seen any thing men="tioned of it but in the older Authors – As you may "not have it in your power to consult some of "them and wishing to further your views on the subject "I have sent you an extract from R James's Dispensa="tory published in 1764. Aranea Offic: the spider. "Both the spider and the web are used. the spider is said "to avert the paroxysms of fevers. if it be applied to the "Pulse of the wrist or the temples, but peculiarly recom="mended against a quartan, being enclosed in the shell of a

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Hasell Nut* the web astringes and agglutinates & is therefore a
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the country people have a tradition, that a small quantity
of spiders web, given about an hour before the fit of an ague
and repeated immediately before it, is effectual in curing that
troublesome & sometimes obstinate distemper. This remedy is not
confined to our own country, and I am well informed, that
the Indians about North Carolina have great dependance on
this remedy for agues, to which they are much subject.
and I am acquainted with a Gentleman, long resident in
those parts, who assures me, he was himself cured by it of
that distemper. and indeed experience confirms the effi=
=cacy of this medicine in the cure of Agues.
" all that Lewis in his Materia Medica, (pub.d in 1761)
" says on the subject is, Aranearum Tela. Cobwebs – These
" are applied by the common people for stopping bleeding
" of wounds, which they effect not by any styptic power,
" but by adhering to the part and closing the orifices
" of the vessels. Cullen in his Materia Medica makes no
" mention of the spider or its web – Neither can any
" information on the subject be obtained from the

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I remain yours with regard
Hezekia M Haig

A short time after this I had an opportunity of trying the effect of the wet in the following Case.

Priscilla Cox aged 40 a native of N. Carolina was attacked on the twentieth day of July 1817 with an intermittent fever of the Quotidian type, either feeling confidence in her own skill, or not sufficient in that of her Physician; medical aid was not applied for. and she attempted her own cure, The treatment as well as I could learn (as I did not witness it myself) was as follows, Antimonial and other emetics, purgatives, both saline and vegitable, and Peruvian Bark alone and combined with Serpentaria, These proveing unsuccessful a variety of Empirical prescriptions were resorted to without the least effect, one of which however contained a sufficient quantity of some mercurial preparation as to produce Ptialysm, The patient labouring under the

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operation of those various articles of the Materia Medica, and experiencing no relief, was determined by taking no more medicine to allow the disease to wear itself out, with the prospect of a winter endured tedious and uncomfortable by the effect of disease, This brought her to the 28th of August 1817 when being informed of her situation I visited and recommended the web which after some persuasion she consented to try, I prepared a few pills containing each 4 grains of the web, with directions to take three every day, an hour before the expected attack, for the first three days, after which if the fever was not checked to increase the dose to four pills, On the 31st she took the first with the effect of shortening the chill bringing on the hot stage, On the first of September the second dose was taken, the chill was completely lost and the fever postponed some hours, On the second of Sept. the third dose was exhibited, the fever that day was found ~~that day to~~ comparatively slight, attended with no chill, and of short duration, on the third

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of Sept. four Pills were given and the fever did not return, the Patient was relieved in four days of an Intermittent of six weeks duration, which had baffled the strength of several of the most useful articles of the Materia Medica.

I exhibited the act in several cases, but in consequence of some Patients exposing themselves to night air and unhealthy atmosphere, and others not taking it regularly, the article had not a fair trial and I have omitted their insertion.